

Claims

- [c1] An apparatus for removing spinal cord material from a carcass of an animal comprising:
an elongated flexible tube forming a vacuum casing;
a flexible rotatable shaft extending through said tube and captured therein;
and
a cutting bit attached to a tip end of the shaft and extending from the tube operable for engaging and breaking down a spinal cord material sufficient for vacuuming.
- [c2] The apparatus for removing spinal cord material as recited in Claim 1
where the cutting bit is an auger style bit.
- [c3] The apparatus for removing spinal cord material as recited in Claim 1
where the cutting bit is a drill style bit.
- [c4] The apparatus for removing spinal cord material as recited in Claim 1
where the elongated flexible tube is in communication with a vacuum source.

[c5] The apparatus for removing spinal cord material as recited in Claim 1
where the rotatable shaft is operably attached to a rotation drive for effecting rotation of the shaft and bit.

[c6] A method for removing spinal cord material from a carcass of an animal
comprising the steps of:
inserting an elongated flexible tube vacuum casing through a spinal channel of a carcass where said tube has a flexible rotatable shaft extending there through and a cutting bit attached to a leading tip end of the rotatable shaft;
driving rotation of the rotatable shaft and bit attached thereto with a rotation drive for breaking down a spinal cord material;
and
applying a vacuum for extracting spinal cord material with a vacuum source in communication with the elongated flexible tube vacuum casing.

[c7] The method for removing spinal cord material as recited in Claim 6 further
comprising the steps of:
inserting a feed line through the spinal canal of an animal carcass where said feed line has a pull chain at-

tached to a trailing edged of the feed line; and pulling the feed line and pull chain attached thereto through the spinal channel where said pull chain has linkages of spiral spring cutting head implements.

- [c8] The method for removing spinal cord material as recited in Claim 6 further comprising:
inserting an elongated tube vacuum casing through the spinal channel of a carcass where said elongated flexible tube has a flexible high pressure tubing extending there through and a high pressure nozzle in fluid communication with said high-pressure tubing and attached to one end of the high pressure tubing for emitting a high pressure jet spray;
emitting the high pressure jet spray at a pressure sufficient to break down the spinal cord material for vacuuming out; and
applying a vacuum to the flexible tube vacuum casing for extracting the spinal cord material.

- [c9] An apparatus for removing spinal cord material from a carcass of an animal comprising:
a pull chain having linkages of spiral spring cutting head implements; and
a feed line attached to an end of the chain for insertion

through the spinal canal and pulling the pull chain through.

[c10] The apparatus for removing spinal cord material as recited in Claim 9
where the pull chain further having linkages of spiral spring cutting head implements with differing diameter cutting edges.

[c11] The apparatus recited in Claim 9 further comprising:
a line drive for pulling the feed line and chain through the canal; and
a sanitization system having high-pressure spray nozzles proximately disposed to the pull chain after it exits the carcass operable to spray sanitizer solution on the pull chain for sanitizing and removing debris.

[c12] A method for removing spinal cord material from an animal carcass
comprising the steps of:
inserting a feed line through the spinal canal of an animal carcass where said feed line has a pull chain attached to a trailing edge of the feed line; and
pulling the feed line and pull chain attached thereto through the spinal channel where said pull chain has linkages of spiral spring cutting head implements.

- [c13] The method for removing spinal cord material as recited in Claim 12
further comprising the steps of:
sanitizing the pull chain with a sanitizer solution.
- [c14] An apparatus for removing spinal cord material from a carcass of an animal comprising:
an elongated flexible tube forming a vacuum casing; and
a flexible high-pressure tubing extending through said elongated flexible tube and captured therein for channeling and delivering fluid under high pressure to a high pressure nozzle for emitting a jet spray of fluid sufficient to break down a spinal cord material for vacuuming through the elongated flexible tube.
- [c15] The apparatus for removing spinal cord material as recited in Claim 14
further comprising:
A vacuum source in communication with the elongated flexible tube forming a vacuum.
- [c16] The apparatus as recited in Claim 15 further comprising:
a high pressure fluid source in fluid communication with said high-pressure tubing.
- [c17] A method for removing spinal cord material from a car-

cass of an animal

comprising the steps of:

inserting an elongated flexible tube vacuum casing through the spinal channel of a carcass where said elongated flexible tube has a flexible high pressure tubing extending there through and a high pressure nozzle in fluid communication with said high-pressure tubing and attached to one end of the high pressure tubing for emitting a high pressure jet spray;

emitting the high pressure jet spray at a pressure sufficient to break down a spinal cord material for vacuuming out; and

applying a vacuum to the flexible tube vacuum casing for extracting the spinal cord material.

- [c18] An apparatus for removing spinal cord material from a carcass of an animal comprising:
- an elongated flexible tube forming a vacuum casing;
 - a cutting implement attached to an end opening of the leading end of the tubing and extending from the rim of the opening of the tubing operable for engaging and breaking down a spinal cord material sufficient for vacuuming.